

Abstract of the Disclosure

A system for stimulating the production of hydrocarbon containing substances, such as from oil and gas wells, by the use of a generally cylindrical, high energy producing transducer mechanism. The transducer comprises a series of aligned transducer elements, preferably formed of doped ceramic piezoelectric materials, encased in a housing maintained under controlled pressure by a pressure compensator to equalize the pressure within the housing to that of the surrounding strata containing the hydrocarbon substance. When energized, the respective transducer elements transmit a very narrow, horizontal beam of ultrasonic energy radiating omni directionally, preferably in a narrow band of about 2 to 3°, to thereby focus the energy horizontally for maximum penetration into the surrounding strata.

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